



XT5988

15 INCH

COLOR MONITOR

USER'S MANUAL

Features

- 0.28 mm Dot Pitch
- 1280 x 1024, Non-Interlaced
- 90 Hz Refresh Rate (VGA/SVGA)
- Power Saving Operation (VESA DPMS)
- Non-Glare Screen
- Full Screen Display
- Digital Controls
- RGB Color Match Controls
- Low Radiation

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Warning

- Read all these instructions. Save for later use.
- Do not expose this unit to rain or moisture.
- Do not use this unit with an extension cord or any outlet other than a three prong outlet.
- Do not open the cabinet. There are no user serviceable components inside. Refer all servicing to a qualified technician.
- Do not cover the vent holes in the case. These are to allow ventilation.
- Do not insert sharp objects into the monitor. They may cause fire accident or failure.
- Install the equipment near an AC outlet.
- Follow all instructions and warnings on the product.
- Do not place the product on an unstable cart.
- Operate from power source indicated on the label.
- Do not allow anything to rest on the power cord.
- Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - A. When the power cord or plug is damaged or frayed.
 - B. If liquid has been spilled into the product.
 - C. If the product has been exposed to rain or water.
 - D. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of the other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
 - E. If the product has been dropped or the cabinet has been damaged.
 - F. If the product exhibits a distinct change in performance, indicating a need for service.

Section 1 - General Information

Congratulations on purchasing a MaxTech 15-inch Color Monitor. The monitor has one of the finest CRTs available in the industry, providing a full range of video display resolutions and complies with the MPR-II standard to reduce electromagnetic emissions.

The monitor has a 0.28 mm dot pitch display with a 75 MHz video bandwidth. It supports video resolutions ranging from 640 x 350 to 1280 x 1024 (non-interlaced).

The monitor can be used with video cards supporting VGA, SVGA, IBM 8514/A or XGA modes and provides an unlimited palette of colors.

1.1 Precautions When Using the Monitor

When setting up and using your monitor, pay special attention to the following:

- To eliminate eye fatigue, do not use your monitor against a bright background or where sunlight or other light sources will shine directly on the monitor.
- Your monitor should be placed just below eye level for optimum viewing.
- Allow adequate ventilation around the monitor so that heat from the monitor can properly dissipate.
- Neither the monitor itself nor any other heavy object should rest on the power cord. Damage to a power cord can cause fire or electrical shock.
- Keep the monitor away from high capacity transformers, electric motors and other strong magnetic fields.
- Do not use your monitor in a damp, dusty or dirty area.
- Handle the monitor with care when transporting.
- Unplug the monitor during electrical storms.

1.2 Power Saving Modes

The MaxTech monitor supports VESA Display Power Management Signaling (DPMS) SUSPEND and OFF modes. DPMS defines a method for a computer to signal the monitor to reduce its power consumption when idle. DPMS features must be supported by both the computer and the monitor for them to be available. Computer support of DPMS requires the use of a DPMS compliant video card.

The monitor enters DPMS SUSPEND mode when the computer turns off the Vertical Synchronization signal. This power-saving mode reduces the monitor's power consumption to 25W. While in this mode the first LED in the Power Indicator (LED A in Figure 3-1) is off. When the synchronization signal is re-enabled the monitor returns to normal operation.

The monitor enters DPMS OFF mode when the computer turns off both the

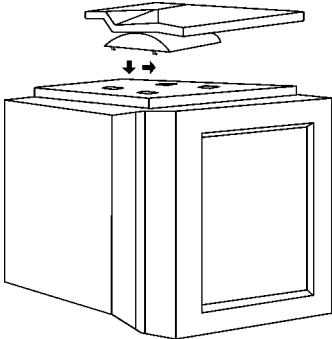
Horizontal and Vertical Synchronization signals. This mode reduces the monitor's power consumption to 5W. While in this mode the first and second LEDs in the Power Indicator (LEDs A and B in Figure 3-1) are off. When the synchronization signals are re-enabled the monitor returns to normal operation.

Section 2 - Installation

2.1 Attaching the Base

- Carefully place the monitor on its side or top.
- Insert the hooks on the swivel base into the slots in the bottom of the monitor. Push down and forward on the base until it snaps into place.
- Place the display upright in an appropriate location.

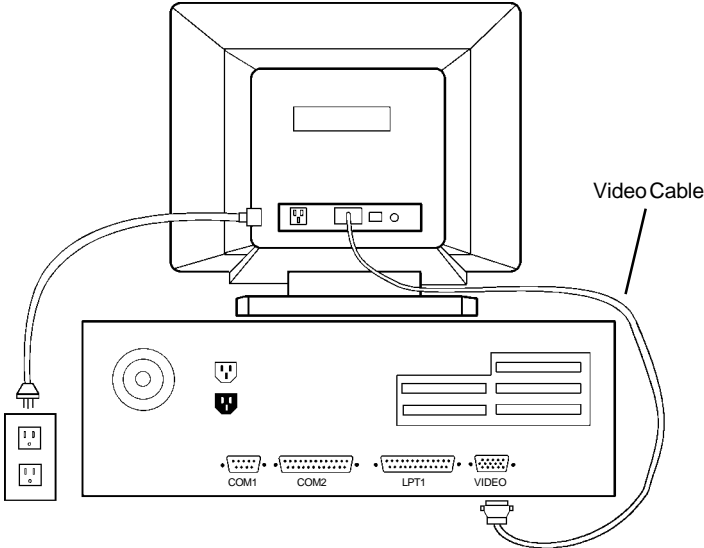
Figure 2-1 Connecting the Base



2.2 Connecting the Cable

- Make sure that power to the monitor and the computer is off.
- Connect the cable from the back of the monitor to the video connector on the computer.

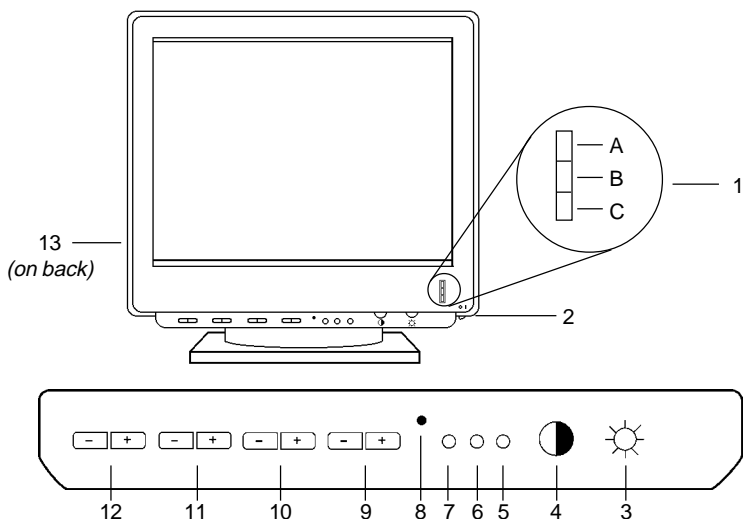
Figure 2-2 Monitor Connections



- Attach the power cord to the monitor and plug it into an AC outlet.
- The monitor is now ready for use.

Section 3 - Monitor Controls and LEDs

Figure 3-1 Controls and LEDs



1. Power Indicator:

LEDs A, B, and C (See Figure 3-1) indicate the operational state of the monitor.

1.1 LEDs A, B and C are lit: The monitor is in normal operating mode.

1.2 Only LEDs B and C are lit: The monitor is in the power saving "SUSPEND" mode. In this mode the monitor uses only 25W. The screen is blank.

1.3 Only LED C is lit: The monitor is in the power saving "OFF" mode. The monitor is in minimum power state and uses only 5W. The screen is blank.

1.4 All LEDs are off: The power switch is off.

2. Power Switch:

Turns the monitor on (|) or off (O)

3. Brightness Control:

Adjusts the display brightness.

4. Contrast Control:

Adjusts the display contrast.

5. Degaussing Control

Press to clear color impurity of the display.

6. Memory Recall

Push to reset the display to the default parameters.

7. Dual-Function Toggle

Pressing this switch cycles between the two sets of functions controlled by the four pairs of buttons (9-12). When the **Function Indicator** (8) is off these buttons control **Function Group A**: Vertical Position, Vertical Size, Horizontal Position and Horizontal Size. When the **Function Indicator** (8) is on, these buttons control **Function Group B**: Pincushion and RGB Color Adjustments.

8. Function Indicator

Indicates whether **Function Group A** (LED off) or **Function Group B** (LED on) is in effect for controls 9 through 12.

9-12 Dual Function Controls

*Controls 9-12 are digital controls. Each control has two buttons, (+) and (-). The (+) and (-) buttons increase or decrease the value being adjusted, respectively. Each control is assigned a normal and an alternate function group which is selected using the **Dual-Function Toggle** (7). Function Group A is selected for adjustment when the **Function Indicator** (8) is off. Function Group B is selected for adjustment when the **Function Indicator** (8) is on.*

9.* A. Vertical-Position

Adjusts the vertical position. The (+) button moves the display area up. The (-) button moves the display area down.

B. Pincushion

Adjusts the shape of the left and right sides of the display. The (+) button makes the display curve out, The (-) button makes the display curve in.

10.* A. Vertical-Size

Adjusts the display height. The (+) button increases the height. The (-) button decreases the height.

B. Color Adjustment - Red

Adjusts the intensity of the red signal. The (+) button increases the red intensity, The (-) button decreases the red intensity.

11.* A. Horizontal-Position

Adjusts the horizontal position. The (+) button moves the display area to the right. The (-) button moves the display area to the left.

B. Color Adjustment - Green

Adjusts the intensity of the green signal. The (+) button increases the green intensity, The (-) button decreases the green intensity.

12.* A. Horizontal-Size

Adjusts the display width. The (+) button makes the display area wider. The (-) button makes the display area narrower.

B. Color Adjustment - Blue

Adjusts the intensity of the blue signal. The (+) button increases

the blue intensity, The (-) button decreases the blue intensity.

13. Rotation Control (rear of unit)

Adjusts display tilt.

Dual function controls. Use the **Dual-Function Toggle (7) to switch between Function Group A and Function Group B.*

Section 4 - Troubleshooting

No picture, power indicators A, B, C off

- Check AC cord is plugged into outlet and monitor.
- Turn on the power switch.

No picture, power indicators A, B, C on.

- Adjust brightness and contrast controls.

No picture, power indicator A off, indicators B and C on.

- Monitor is in DPMS "SUSPEND" mode. Press a key or move the mouse.

No picture, power indicators A and B off, indicator C on.

- Monitor is in DPMS "OFF" mode. Press a key or move the mouse.
- Check that video cable is connected completely.

Image is not centered

- Adjust Vertical Position and Horizontal Position controls.

Appendix A - Specifications

Picture Tube	Size	15-inch diagonal
	Dot pitch	0.28mm
	Surface treatment	Anti-glare

Bandwidth 75 MHz

Data Area 11.125 x 8.5 in.

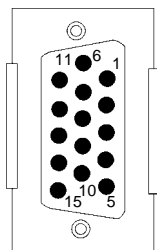
Display mode

<u>Mode</u>	<u>Resolution</u>	<u>V. Frequency</u>	<u>H. Frequency</u>
VGA	640 x 350	70 Hz	31.47 KHz
VGA	640 x 400	70 Hz	31.47 KHz
VGA	640 x 480	60 Hz	31.47 KHz
VGA	640 x 350	84 Hz	37.86 KHz
VGA	640 x 400	84 Hz	37.86 KHz
VGA	640 x 480	72 Hz	37.86 KHz
MAC-II	640 x 480	67 Hz	35.00 KHz
8514A	1024 x 768	87 Hz	35.52 KHz
SVGA	800 x 600	56 Hz	35.16 KHz
SVGA	800 x 600	60 Hz	37.88 KHz

SVGA	800 x 600	72 Hz	48.09 KHz
Ultra VGA	1024 x 768	60 Hz	48.37 KHz
Ultra VGA	1024 x 768	70 Hz	56.47 KHz
Ultra VGA	1280 x 1024	60 Hz	64.31 KHz
Synchronization	Horizontal:	30-66 KHz	
	Vertical:	50-90 Hz	
Deflection			
Geometric distortion		H<=2.5mm, V<=2.5mm	
Linearity distortion		H<=10%, V<=8%	
Pincushion distortion		<=2mm	
High voltage regulation		H<=4mm, V<=4mm(0-25FL)	
Low radiation	MPR-I specification		
Front controls	Power, Brightness, Contrast, Horizontal-Size, Horizontal-Position, Vertical-Size, Vertical-Position, Pincushion, Rotation, RGB Color Adjustment, Memory Recall		
Rear Control	Display Tilt		
Power saving	<i>Display Power Management Signaling (DPMS)</i>		
	SUSPEND mode	25W (Max.)	
	OFF mode	5W (Max.)	
Input voltage	100-240VAC, 50/60 Hz		
Power consumption	95W maximum		
Operating Environment	Temperature	0-40°C	
	Humidity	20-90% (non-condensing)	
	Altitude	0-10,000ft.	
Connector	15 Pin D-Sub		
Dimensions	14.63 x 14.62 x 16.21 in.		
<i>Specifications subject to change without notice.</i>			

Appendix B - Video Cable Pinout

Figure B-1 Pin Layout and Pin Assignment Chart



PIN	SIGNAL	PIN	SIGNAL
1	Red	9	No Connect
2	Green	10	Digital Ground
3	Blue	11	Monitor Sense 1 (Jumper to Pin 10)
4	Monitor Sense 1 (Jumper to Pin 10)	12	No Connect
5	Monitor Sense 1 (Jumper to Pin 10)	13	Hor. Synchron.
6	Red Return	14	Vert. Synchron.
7	Green Return	15	No Connect
8	Blue Return		

Appendix C - Service Port

The RJ-45 jack on the rear of the monitor is only used for factory servicing. Do not plug any device into this port.

Appendix D - Two Year Warranty

MaxTech warrants to the original buyer of this product against defects in material and workmanship for two years from the date of purchase.

Except as specified below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed in North America by MaxTech or which is not purchased in North America from an authorized MaxTech Dealer.
2. Any product on which the serial number has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
 - a. Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature, commercial or industrial use, unauthorized product modification, or failure to follow instructions supplied with the product.
 - b. Repair or attempted repair by anyone not authorized by MaxTech.
 - c. Any shipment of the product (claims must be presented to the carrier).
 - d. Removal or installation of the product.
 - e. Any other cause which does not relate to a product defect.
4. Cartons, carrying cases, batteries, external cabinets, magnetic tapes or any accessories used in connection with the product.

MaxTech will pay all labor and material expenses for covered items, but we will not pay for the following:

1. Removal or installation charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls.
3. Payment of shipping charges.

HOW TO OBTAIN WARRANTY SERVICE

If you have problems with your monitor, refer to the troubleshooting section of this manual. If you are unable to resolve the problem, contact the dealer or distributor from whom the product was purchased. A defective monitor should be returned in its original packaging to your dealer for warranty service.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

MaxTech's liability for any defective product is limited to the repair or replacement of the product, at our option. MaxTech shall not be liable for:

1. Damage to other property caused by any defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or
2. Any other damages, whether incidental, consequential or otherwise.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

HOW STATE LAW RELATES TO THE WARRANTY

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Appendix E - Notices

FCC Class B Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio / TV technician for help

Notice: Shielded cables, if any, must be used in order to comply with the emission limits. Any change or modification not expressly approved by the Grantee of the equipment authorization could void the user's authority to operate the equipment.

Canadian DOC Compliance Statement

This equipment does not exceed Class B limits for radio noise emissions for a digital apparatus, set out in the Radio Interference Regulations of the Canadian Department of Communications. Operation in a residential area may cause unacceptable interference to radio and TV reception requiring the owner or operator to take whatever steps necessary to correct the interference.

Cet équipement ne dépasse pas les limites de Class B d'émission de bruits radioélectriques pour les appareils numériques, telles que prescrites par le Règlement sur le brouillage radioélectrique établi par le ministère des Communications du Canada. L'exploitation faite en milieu résidentiel peut entraîner le propriétaire ou l'opérateur à prendre dispositions nécessaires pour en éliminer les causes.

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